IN THE CLAIMS:

Please amend claims 1-9, 13-14, and 18-19 as follows.

1. (Currently Amended) ~~An error adjustment system for equalizing transmission characteristics of N signal processing circuitries according to N signal branches (N>1), the system~~ A system, comprising:

a ~~generating unit~~ generator configured to generate an original complex time domain IQ signal for N (N>1) signal branches;

N error ~~correction units~~ correctors according to the N signal branches, each configured to perform error correction on the original complex time domain IQ signal of a respective signal branch by means of a correction function;

N signal processing circuitries according to the N signal branches, each configured to process the corrected complex time domain IQ signal of the respective signal branch, thereby obtaining a processed real signal of the respective signal branch; and

a processing device comprising

a ~~receiving unit~~ receiver configured to receive an original complex time domain IQ signal of a signal branch of the N signal branches generated by the ~~generating unit~~ generator and a processed real signal of the signal branch;

a first ~~calculating unit~~ calculator configured to calculate a processed complex time domain IQ signal of the signal branch from the processed real signal and

the original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

a second ~~calculating unit~~ calculator configured to calculate a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

a third ~~calculating unit~~ calculator configured to calculate control values of a correction function of the signal branch on the basis of the difference calculated by the second ~~calculating unit~~ calculator; and

a ~~supplying unit~~ supplier configured to supply the control values calculated by the third ~~calculating unit~~ calculator to the correction function of the signal branch,

wherein the ~~receiving unit~~ receiver, the first to third ~~calculating units~~ calculators and the ~~supplying unit~~ supplier are configured to repeat their operations for all N signal branches.

2. (Currently Amended) The system according to claim 1, further comprising:

N ~~detecting units~~ detectors according to the N signal branches, configured to detect an envelope of the processed real signal,

wherein the ~~receiving unit~~ receiver of the processing device is configured to receive the original complex time domain IQ signal of the signal branch generated by the

~~generating unit~~ generator and the envelope of the processed real signal of the signal branch, and

wherein the first ~~calculating unit~~ calculator is configured to calculate a processed complex time domain IQ signal of the signal branch from the envelope of the processed real signal and the original complex time domain IQ signal of the signal branch.

3. (Currently Amended) The system according to claim 2, wherein the first ~~calculating unit~~ calculator is configured to calculate an envelope of the original complex time domain IQ signal of the signal branch and to compare the envelope of the processed real signal with the envelope of the original time domain IQ signal at two consecutive time instances, thereby obtaining a processed complex time domain IQ signal.

4. (Currently Amended) The system according to claim 3, wherein the processing device further comprises a ~~synchronizing unit~~ synchronizer configured to synchronize the envelope of the processed real signal and the original complex time domain IQ signal of the signal branch, and the first ~~calculating unit~~ calculator is configured to compare the envelope of the processed real signal synchronized with the original complex time domain IQ signal with the envelope of the original time domain IQ signal at two consecutive time instances, thereby obtaining a processed complex time domain IQ signal.

5. (Currently Amended) The system according to claim 1, wherein the third ~~calculating unit~~ calculator is configured to approximate a gradient of the difference calculated by the second ~~calculating unit~~ calculator on the basis of the difference and an approximation of a transmission characteristic of the signal processing circuitry of the signal branch, and to update control values of the correction function based on the approximated gradient, and wherein the ~~supplying unit~~ supplier is configured to supply the updated control values to the correction function of the signal branch.

6. (Currently Amended) ~~A processing device for an error adjustment system for equalizing transmission characteristics of N signal processing circuitries according to N signal branches (N>1), the device~~ An apparatus, comprising:

a ~~receiving unit~~ receiver configured to receive an original complex time domain IQ signal of a signal branch of N (N>1) signal branches and to receive a processed real signal of the signal branch;

a first ~~calculating unit~~ calculator configured to calculate a processed complex time domain IQ signal of the signal branch from the processed real signal and the original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

a second ~~calculating unit~~ calculator configured to calculate a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

a third ~~calculating unit~~ calculator configured to calculate control values of a correction function of the signal branch on the basis of the difference calculated by the second ~~calculating unit~~ calculator; and

a ~~supplying unit~~ supplier configured to supply the control values calculated by the third ~~calculating unit~~ calculator to the correction function of the signal branch,

wherein the ~~receiving unit~~ receiver, the first to third ~~calculating unit~~ calculators and the ~~supplying unit~~ supplier are configured to repeat their operations for all N signal branches.

7. (Currently Amended) The ~~processing device~~ apparatus according to claim 6, wherein the ~~receiving unit~~ receiver and the ~~supplying unit~~ supplier are formed by a data bus, and wherein the first to third ~~calculating units~~ calculators are formed by a digital signal processor.

8. (Currently Amended) The ~~processing device~~ apparatus according to claim 7, further comprising a storage ~~unit~~ device configured to store algorithms to be carried out by the digital signal processor.

9. (Currently Amended) ~~An error adjustment method of equalizing transmission characteristics of N signal processing circuitries according to N signal branches, the method~~ A method, comprising:

generating an original complex time domain IQ signal for N signal branches; ~~and~~

in each of the N signal branches,

performing error correction on the original complex time domain IQ signal by means of a correction function;

processing the corrected complex time domain IQ signal in a signal processing circuitry, thereby obtaining a processed real signal; ~~and~~

in a processing device,

receiving an original complex time domain IQ signal of a signal branch of the N signal branches generated and a processed real signal of the signal branch;

first calculating a processed complex time domain IQ signal of the signal branch from the processed real signal and the original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

second calculating a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

third calculating control values of a correction function of the signal branch on the basis of the difference calculated in the second calculating;

supplying the control values calculated in the third calculating to the correction function of the signal branch; and

repeating the steps performed in the processing device for all N signal branches.

10. (Previously Presented) The method according to claim 9, further comprising:

in each of the N signal branches,

detecting an envelope of the processed real signal,

wherein the receiving comprises receiving the original complex time domain IQ signal of the signal branch generated and the envelope of the processed real signal of the signal branch, and

wherein the first calculating comprises calculating a processed complex time domain IQ signal of the signal branch from the envelope of the processed real signal and the original complex time domain IQ signal of the signal branch.

11. (Previously Presented) The method according to claim 10, wherein the first calculating comprises:

calculating an envelope of the original complex time domain IQ signal of the signal branch; and

comparing the envelope of the processed real signal with the envelope of the original time domain IQ signal at two consecutive time instances, thereby obtaining a processed complex time domain IQ signal.

12. (Previously Presented) The method according to claim 11, further comprising:

in the processing device,

synchronizing the envelope of the processed real signal and the original complex time domain IQ signal of the signal branch,

wherein the envelope of the processed real signal synchronized with the original complex time domain IQ signal is compared with the envelope of the original time domain IQ signal at two consecutive time instances, thereby obtaining a processed complex time domain IQ signal.

13. (Currently Amended) The method according to claim 9, wherein the third calculating comprises:

approximating a gradient of the difference calculated in the second calculating on the basis of the difference and an approximation of a transmission characteristic of the signal processing circuitry of the signal branch; and

updating control values of the correction function based on the approximated gradient~~; and~~,

wherein, the supplying comprises supplying the updated control values to the correction function of the signal branch.

14. (Currently Amended) A method, ~~of equalizing transmission characteristics of N signal processing circuitries according to N signal branches, the method~~ comprising:

first calculating a processed complex time domain IQ signal of a signal branch of N signal branches from a processed real signal and an original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

second calculating a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

third calculating control values of a correction function of the signal branch on the basis of the difference calculated in the second calculating; and

repeating the first to third calculating for all N signal branches.

15. (Previously Presented) A computer program product, embodied on a computer-readable medium, the computer program product comprising software code portions for controlling a computer to perform the following:

first calculating a processed complex time domain IQ signal of a signal branch of N signal branches from a processed real signal and an original complex time domain IQ

signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

second calculating a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

third calculating control values of a correction function of the signal branch on the basis of the difference calculated in the second calculating; and

repeating the first to third calculating for all N signal branches.

16. (Canceled).

17. (Original) The computer program product according to claim 15, wherein the computer program product is directly loadable into an internal memory of the computer.

18. (Currently Amended) ~~An error adjustment system for equalizing transmission characteristics of N signal processing circuitries according to N signal branches (N>1), the system~~ A system, comprising:

generating means for generating an original complex time domain IQ signal for N (N>1) signal branches;

N error correction means according to the N signal branches, each for performing error correction on the original complex time domain IQ signal of a respective signal branch by means of a correction function;

N signal processing means according to the N signal branches, each for processing the corrected complex time domain IQ signal of the respective signal branch, thereby obtaining a processed real signal of the respective signal branch; and

a processing device comprising

receiving means for receiving an original complex IQ time domain signal of a signal branch of the N signal branches generated by the generating means and a processed real signal of the signal branch;

first calculating means for calculating a processed complex time domain IQ signal of the signal branch from the processed real signal and the original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

second calculating means for calculating a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

third calculating means for calculating control values of a correction function of the signal branch on the basis of the difference calculated by the second calculating means; and

supplying means for supplying the control values calculated by the third calculating means to the correction function of the signal branch,

wherein the receiving means, the first to third calculating means and the supplying means ~~are configured to~~ repeat their operations for all N signal branches.

19. (Currently Amended) ~~A processing device for an error adjustment system for equalizing transmission characteristics of N signal processing circuitries according to N signal branches (N>1), the device~~ An apparatus, comprising:

receiving means for receiving an original complex time domain IQ signal of a signal branch of N signal branches and receiving a processed real signal of the signal branch;

first calculating means for calculating a processed complex time domain IQ signal of the signal branch from the processed real signal and the original complex time domain IQ signal of the signal branch using digital sample signs of the original complex time domain IQ signal of the signal branch;

second calculating means for calculating a difference between the processed complex time domain IQ signal and the original complex time domain IQ signal;

third calculating means for calculating control values of a correction function of the signal branch on the basis of the difference calculated by the second calculating means; and

supplying means for supplying the control values calculated by the third calculating means to the correction function of the signal branch,

wherein the receiving means, the first to third calculating means and the supplying means ~~are configured~~ to repeat their operations for all N signal branches.